Market Surveillance

ASEAN-EU Programme for
Regional Integration Support
(APRIS) – Phase II

Workshop 9-10 Nov. 2009

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Project funded by the European Union
Implemented by IBF in consortium with CEN, Crown Agents and ACE

Control of EEE products on the market

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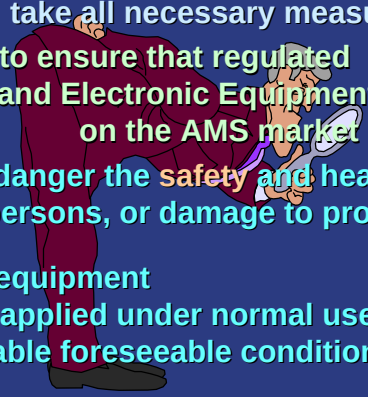
Asian Member States (AMS) must
take all necessary measures
to ensure that regulated EEE
(Electrical and Electronic Equipment) placed
on the AMS market

I: do not endanger the safety and health of
persons, or damage to property,

when the equipment is
correctly applied under normal use or
reasonable foreseeable conditions of misuse



Control of EEE products on the market

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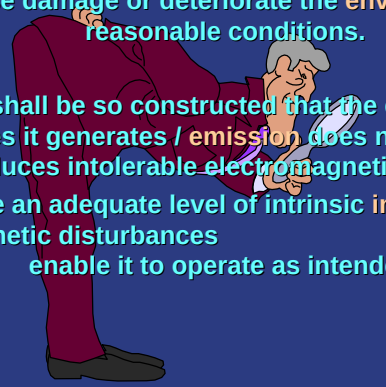
II: An EEE placed on the ASEAN market
shall no cause damage or deteriorate the environment under
reasonable conditions.

III: The EEE shall be so constructed that the electromagnetic
disturbances it generates / emission does not exceed a level
that introduces intolerable electromagnetic disturbances,
and shall have an adequate level of intrinsic immunity to
electromagnetic disturbances to
enable it to operate as intended.



Control of EEE products on the market

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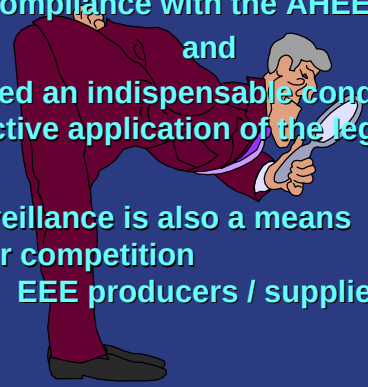
Market Surveillance is a means for ensuring
compliance with the AHEEERR
and
is considered an indispensable condition for
effective application of the legislation

Market Surveillance is also a means to
promote fair competition among
EEE producers / suppliers



MS responsibilities

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MS Authorities are responsible to
check / monitor

- that consumer products meet applicable requirements
- that steps are taken to make products compliant
- that sanctions are applied when necessary

Responsibilities

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Customs Authorities
are responsible to check

the import of products from third countries

Co-operation between MS and Customs Authorities
is thereby a asset for preventing non-compliant products
(products not fulfilling all legal requirements)
entering the market place !

Post Market Surveillance versus Pre Market Surveillance

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Post Market Surveillance (**PMS**)
implies that MS Authorities are responsible
to check / monitor products
already placed on their market

Pre Market Surveillance
refers to controlling products before
they are placed on the market, e.g. by
supervision, inspection and certification

Safety
Liability vis-à-vis Safety

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Product safety

- Rules to prevent accidents
- Protection requirements must be fulfilled
  before a product is placed on the market

Product liability

- Rules for the liability when an accident has occurred
  or for damage caused by a defect product

Post Market Surveillance

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To be able to monitor products placed on the market, PMS Authorities must have power, competence & resources:

- to visit commercial and storage premises
- to visit premises where products are put into service
- to organise random and spot checks
- to subject samples of products to examination and testing
- to require necessary information

Control & Collaboration

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National PMS Authorities primary function is to monitor that products placed on the market comply with the provisions of AHEEERR

Subsequently, when necessary, the authorities shall take action to establish conformity

Although market surveillance operations cannot take place during the design and product stages, efficient enforcement requires that MS Authorities act in collaboration with manufacturers and suppliers in order to prevent that non-compliant products are placed on the market.

Risk-based Market Surveillance

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For market surveillance to be efficient, resources should be concentrated where risks are likely to be higher or non-compliance more frequent, or where a particular interest can be identified.

Statistics and risk assessment procedures can be used for this purpose.

Market Surveillance vis-à-vis Conformity Assessment

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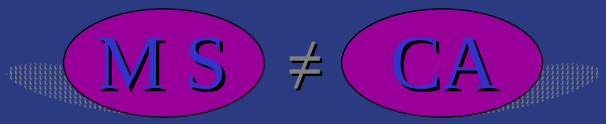
'The purpose of a harmonized Market Surveillance regime is to ensure that the provisions of applicable legal requirements are complied with across the Community'



It is necessary to make a clear distinction between
Conformity Assessment**, which takes place** *before* **the product is placed on the market and**
Market Surveillance**, which takes place** *after* **the product has been placed on the market**

Conformity Assessment Bodies and Market Surveillance (MS) Authorities

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MS Authorities
(Enforcement Bodies)

- Designated to control that economic operators are fulfilling their obligations
- State appointed public authorities
- Independent of commercial interest

Designated Laboratories Conformity Assessment Bodies (CABs)

- **Designated to assess conformity with specified requirements**
- **Work on behalf of suppliers or other bodies/organizations**
- **Profit-making**

Product certification

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Product certification is an activity by which a third party gives a written assurance that a product fulfils specified requirements.

Assessment of the fulfillment of requirements in standards or other normative documents is one technique used to resolve any concerns that society has regarding products

Certification schemes may be mandatory or voluntary depending on the intended market for the product.
Mandatory certification is subject to enforcement by law.
Voluntary certification schemes are undertaken by manufacturers to demonstrate correct quality - to gain market advantage.

Product certification

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Product certification incorporates at least the following three functional stages:

- Selection (sampling)
- Review / Auditing
- Determination & Attestation

Product certification scheme

Product certification scheme is a system related to specific products to which the same specified requirements, specific rules and procedures apply

(Ref. ISO/IEC 17000:2004)

Accreditation

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Accreditation refers to the formal recognition by an Accreditation Body that

a Certification Body / Conformity Assessment Body is competent to carry out certification / testing in specified sectors.

Assessment

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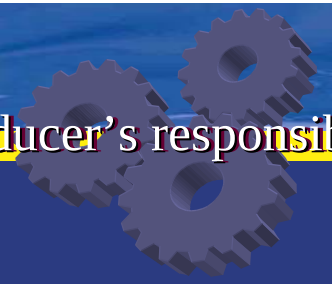
All activities related to the accreditation
of a Certification Body / Conformity Assessment Body
to determine whether it meets the requirements of
relevant clauses of ISO/IEC Guides 61, 62, 65 and/or 66,
or other recognised normative documents,
necessary for granting accreditation,
and whether they are effectively implemented,

including documentation review, preparation and
consideration of accreditation assessment reports
and other relevant activities.

Producer's responsibility



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The producer / supplier is responsible
for fulfilling all essential safety and protection
requirements according to AHEEERR, wherever the
product is manufactured (ASIA, EU, USA…)

The supplier has to ensure that a product complies with
applicable requirements when placing the product on the
internal market of the ASEAN community

Producer's responsibility

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For products manufactured in an AMS
and branded by the manufacturer;
all responsibilities for the product is on the producer.

For products made in an AMS
and branded by the distributor;
**the producer responsibilities should be shared
between the manufacturer and the distributor.**

For products which have been reconditioned;
**the responsibilities of the manufacturer is overtaken
by the person who reconditions the product.**

Responsibilities according to European practices

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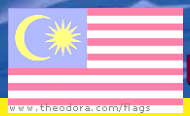
For products made outside the EU and branded by the manufacturer;
**the responsibilities of the producer
is on the manufacturer's representative within EU.
In case no authorized representative is appointed by the
manufacturer, the responsibilities of producer
should be on the company that imports the product
into the EU (which may be the manufacturer's agent).
In practice the importer will generally need to involve
the manufacturer in any corrective action.**

For products made outside the EU
and branded by the EU distributor;
the responsibilities of the producer should be on the distributor.



Malaysian Regulation

Malaysian Electricity Regulation 97.1 (1994)

No person
shall manufacture, import, display, sell or advertise -

- **(a) any domestic equipment;**
- **(b) any equipment which is usually sold direct to the general public; or**
- **(c) any equipment which does not require special skills in its operation.**

unless the equipment is approved by the Commission.

Producer Requirements

➢ IMPORTED PRODUCT
Electrical equipments that have been approved for import into Malaysia shall;

- go through consignment test conducted by SIRIM .for every consignment within the validity of the CoA
  &
- be affixed the label issued by SIRIM.

➢ MANUFACTURED PRODUCT
Electrical equipments that have been approved for manufacturing shall;

- ➢ enlist with SIRIM's Product Certification Scheme,
  &
- ➢ be affixed the label issued by SIRIM.

Manufacturer's legal proceedings

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for CE marking

- A signed Declaration of Conformity (DoC) with reference to applicable directives (LVD, EMCD …)
- A technical file (technical documentation)
- A system to ensure compliance with the legislation (reasonable precautions) and a method to ensure that this system is followed correctly ("due diligence")

Due Diligence

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Example of factors relevant for a manufacturer to show that due diligence has been exercised

- Evidence of tests and checks undertaken
- Evidence that established procedures have been in place and followed
- Evidence of actions taken concerning eventual faults in the past

Offences

- Supplying non-conform equipment
- Taking into service non-conform equipment
- Production / distribution of misleading records
- Relevant instructions for use or eventual warnings not in the official language of the country of use
- Failure to affix relevant marking on equipment covered by applicable legislation
- Incorrect marking of equipment

Product Quality

Quality as defined by ISO 9000:

Degree of which a set of inherent characteristic fulfils requirements

- The extent to which a product fulfils the expectations of the user / client
- The extent to which a product fulfils expected health, safety and protection levels

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PRODUCTS FROM CHINA

IMP
BANN

Product Control

ED

LACK OF RELEVANT MARKING

PRODUCTS WITHOUT IDENTIFICATION

Where / How to check products?

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Supervision
at the manufacturer's premises

Inspection
at the user's premises

Market surveillance
at retailers or wholesalers or at trade fairs or at user's & supplier's premises when appropriate

Market Surveillance

Market surveillance may be performed at customs clearance points, at importers premises, in stocks, ware houses & shops and at exhibitions and/or at user's and supplier's premises - when appropriate.

Information on non-compliance of a product at the moment when it was placed on the market can be obtained during in-use inspections, by analysing factors that caused an accident but must take into account eventual changes of the equipment made by the user/installer.

Approaches to market surveillance

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Where can market surveillance take place?

☺ Consumer products*	✇ Non-consumer products**
☺ Wholesaler	✇ User / Installer
☺ Retailer	✇ Manufacturer or Importer
☺ Trade fair	✇ Trade fair

*series production

**series production or individual design

When checking a product at the user's premises it must be clarified (by control of available documentation) whether the product is the same as when taken into service.

Approaches to market surveillance

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How to do it?

☺ Consumer products:	✇ Non-consumer products:
☺ Documentary check	✇ Documentary check
☺ Product control	✇ Product control
☺ Testing	✇ Approach manufacturer/user ..- testing may be difficult

Enforcement

- Sales ban
- Withdrawal
- Recall
- Prohibit use
- Work with manufacturer/user ...to put the problem right

Approaches to market surveillance

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Use available information!

Information sources of importance for efficient market surveillance planning:

- Accident statistics (with injury details)
- Statistics concerning non-compliant product types
- Statistics concerning suppliers of non-compliant products
- Rapid exchange of information in between MS authorities

Pro-active Market Surveillance

Monitor safety and protection requirements

Check products according to their potential risk:
.... ***Electrical household appliances,***
.....Handheld tools, Lighting equipment ...

- Check markings
- Check product info.
- Check Certificates
- Check test results
- Check manuals
- Control products
- Perform screen testing
- Take samples for lab testing
- Perform partial or full testing
- Check corrective actions

Look at statistics: Products, Manufacturers, Dealers...

Why pro-active???

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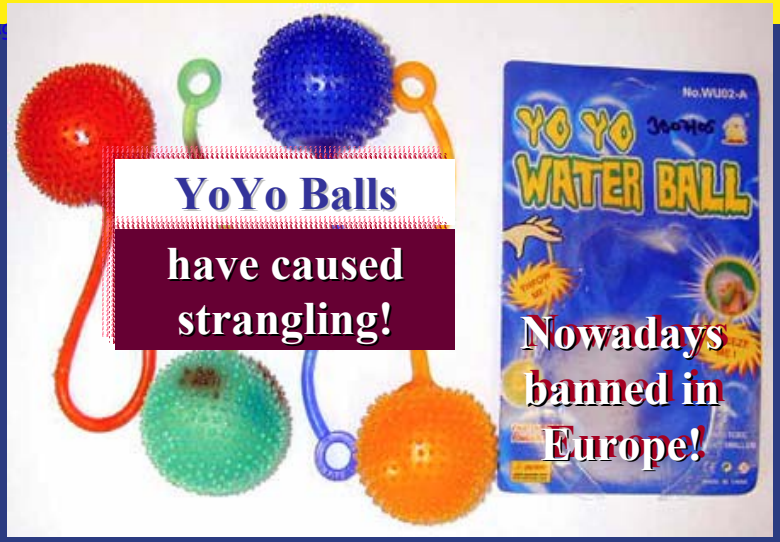

Toy safety aspects

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Particular risks / hazards:

- Physical and mechanical
- Hygiene
- Electrical properties
- Flammability
- Radioactivity
- Chemical properties (plastic, paint* …)

- *Toys with batteries*
- *Toys with small magnets*

* The Chinese government has signed an agreement to conduct pre-export inspections to prevent lead painted toys and other unsafe toys from being exported to the U.S.

Simple check list – for quick & efficient product control

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Toy check	*yes*	*no*
Does the toy have adequate marking?	☐	☐
Does the toy have sharp edges?	☐	☐
Does the toy have easily removable parts?	☐	☐
Does the toy have a line which can cause strangling?	☐	☐
Is the toy intended for children younger than 3 years?	☐	☐
If so, does the toy have an adequate sign for the age limit?	☐	☐
Is there a need for a security warning on the toy?	☐	☐
If so, is the warning adequate (preceded by the world "Attention")?	☐	☐

Check accessible product information

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- ✓ Are there relevant markings affixed on product & package?
- ✓ Is there relevant information about the manufacturer?
- ✓ Are there relevant instructions for use / a product manual?
- ✓ Is the CoC available (or a copy thereof in the manuals)?
- ✓ Is the certificate signed by a Designated Laboratory?
- ✓ Does the CoC include references to relevant standards?

Product marking

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Product marking is intended as information to authorities as well as consumers, to indicate that a product fulfils all requirements of applicable regulations

It is the duty of ASEAN Member States to actively monitor that products on the AMS market fulfill essential safety and protection requirements according to the AHEEERR, and that prescribed procedures for conformity assessment are followed.

Voluntary certification marks might be of additional value!?

Labelling

Check eventual warnings and warning symbols

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A warning should be accompanied by a brief indication of the risks calling for this restriction!

Example of warning

New EU requirement 2008

©

Warning!

This toy contains magnets or magnetic components.

Magnets sticking together or becoming attached to a metallic object inside the human body can cause serious or fatal injury - seek immediate medical help if magnets are swallowed or inhaled.

Check Packaging & Product Information

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- ✓ Does the product packaging look okay?
- ✓ Does it indicate the origin of the product?
- ✓ Are there relevant instructions accompanying the product?
- ✓ Are there instructions for use in the official language of use?
- ✓ Are the instructions legible (if relevant)?
- ✓ Are there instructions for limitation of use (if relevant)?
- ✓ Are there warnings for misuse (if relevant)?
- ✓ Are there any misleading records?

Check product documentation

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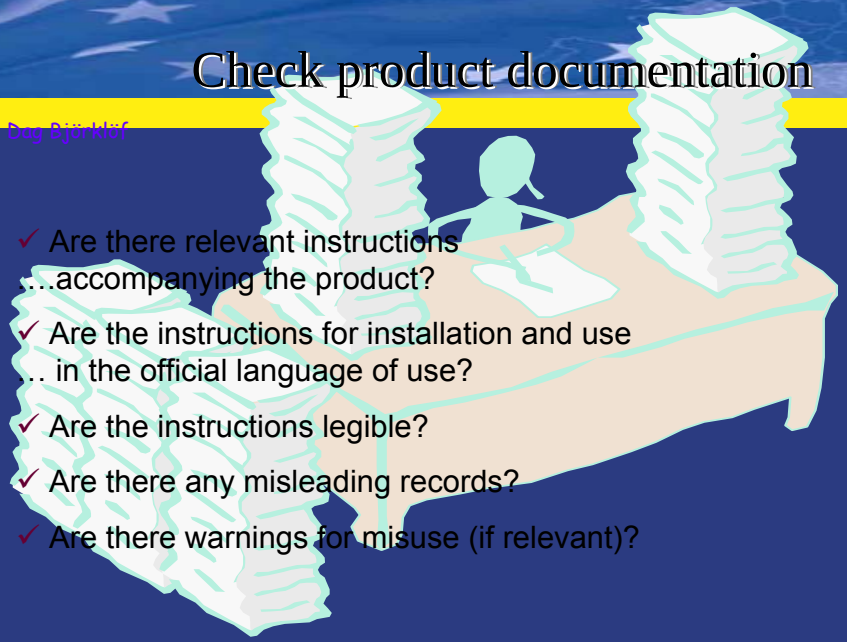

- ✓ Are there relevant instructions …accompanying the product?
- ✓ Are the instructions for installation and use … in the official language of use?
- ✓ Are the instructions legible?
- ✓ Are there any misleading records?
- ✓ Are there warnings for misuse (if relevant)?

Check Certificates / CoC

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Type of equipment:
Brand name or trade mark:
Type designation:
Country of origin:
Manufacturer / Supplier:
Address:

Standards applied:
Other normative references:
Test reports/certificates issued by:

Date and Signature:

Check the Product

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- ✓ Does the product seem to be well made?
- ✓ Are there protection arrangements to prevent electrocution?
- ✓ Are the protection arrangements easily detachable?
- ✓ Are there protections against eventual heat hazards?
- ✓ Are there adequate warnings on the product (if relevant)?
- ✓ Does the product look robust enough?
- ✓ Is the power cord rigidly attached?
- ✓ In case of an electrical product attractive for children . what is the supply voltage?

Screen testing

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Note that in certain cases a simplified screen testing might cause a destruction of a compliant product due to a less controlled test method, e.g.

Too much power is used to check mechanical resistivity:

- ➢ **A pull test to check if the power cord is rigidly connected**
- ➢ **A pull test to check an eventual detachable protection part**
- ➢ **A finger test with a pen or a plastic stick**

Compliance Testing

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Compliance testing usually implies several different lab tests of a product!

Testing

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Informal test (Screening)

Partial Compliance test

Full Standard test

IEC 60 650

Example: TV

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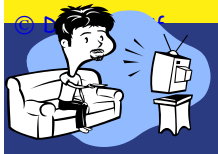

- Control of rated current and voltage
- Control of el. connections (electric shock control)
- Control of mechanical stability (rigidness)
- Temperature control (thermal hazard)
- Flameproof test (Ref.: IEC 60 695)
- Measurement of ionising radiation
- Test of high-voltage components
- Test of picture tubes (CRT´s)

Product family stds

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Product family standards harmonized with LVD

IEC 60 335 Household appliances (“white goods”)

IEC 60 065 Electronic products for household use -audio & video equipment (“brown goods”)

IEC 60 950 IT equipment (incl. business eq.)

IEC 61 010 El. equipment for measurement, control and laboratory use

IEC 60 598 Luminaires

Safety standards for appliances

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Safety of household and similar el. appliances
(IEC 60 335 / EN 60 335 / UL 335 / CSA 335)

IEC 60 335 - 1 General requirements

IEC 60 335 - 2 - N Particular requirements for
N = 2: Vacuum cleaners
N = 3: Electric irons
…
N = 101: Vaporizers

IEC 50 106 Particular requirements for routine tests referring to appliances under the scope of EN 60 335-1

Testing conditions

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The Electrical / Electronic Equipment
must fulfil essential safety and protection requirements
when correctly installed and used in accordance with its purpose (foreseeable use)

Testing has to be performed with the EEE apparatus under test in normal operation conditions

Test planning

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A test plan should include:

- Description of the EUT
- Installation/configuration of the EUT
- Eventual auxiliary equipment (EUT peripherals)
- Operating conditions
- Monitoring during test
- Test methodology/test instrumentation
- Compliance criteria

Reference conditions

External parameters that may influence the result of a test can be numerous! A way of accounting for their influence is to define acceptable limits of variability during testing.

Example on common reference conditions:

- Voltage supply 230 V ± 2 %
- Ambient temperature 23°C ± 2°C
- Relative humidity 93 % ± 2 %

V-AC rating

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Connected to an AC supply net
implies normal operation
within nominal supply voltage rating!

E.g.:

230V ± 10% » 207 V – 253 V
220V ± 10% » 198 V – 242 V
220V -6/+10% » 216 V – 253 V

El. Safety testing

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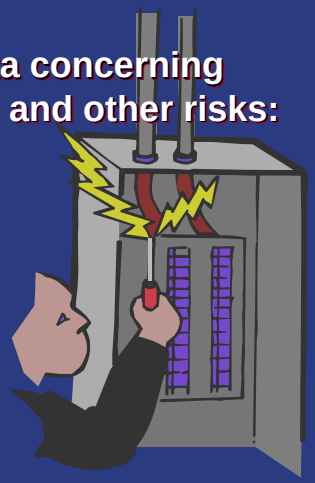
Measuring / Collection of data concerning electrical, mechanical, chemical and other risks:

- Electrical hazards (Electrocusion)
- Other electrical hazards
- Heat hazards
- Fire hazards
- Mechanical hazards
- Chemical hazards
- Ionizing radiation & EM radiation
- Laser & UV light emission hazards



Basic el. safety aspects

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- Protection against el. shock hazards (concerns both accessible and inaccessible parts)
- Insulation requirements:
  - Resistance and dielectric strength
  - Class I: insulation and earth bonding
  - Class II: two layers of insulation
- Limits on creepage and clearance distances
- Limits on leakage currents
- Protection against overheating and fire hazard
- Protection against water and moist
- Requirements for protection of outdoor equipment splashing
- Limits on ionizing and light (laser) radiation
- Requirements for safety critical circuit components

Requirements on electronic products for household use

IEC/EN 60 650

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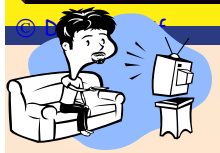

- ✓ Electrical hazards (§ 9, 10 & 11)
- ✓ Fire hazards (§ 7, 13 & 20)
- ✓ Overheating (§ 7)
- ✓ Mechanical & other hazards (§ 6, 18 & 19)
- ✓ Hazards from environment (§12)
- ✓ Hazards from abnormal / faulty conditions (§11)

Insulation properties

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The insulation of an appliance concerns:

- Creepage distance: Shortest distance between two parts along the surface of an insulating material
- Clearance distance: Shortest distance in air between two parts
- Leakage current, insulation resistance and electric strength
- Resistance to tracking
- Humidity

Tracking and Leaking

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Leakage Current, sometimes called Touch Current is measured between two parts, one of which is the supply terminal

Measuring is defined in general product family standards like IEC 60 990 & IEC 60 065 as well as in some product specific standards (e.g. IEC 60 335-1).

Tracking is a parameter characterising electrical insulation under stress, when there is a risk for formation of sparks. It depends on any accumulation of conductive deposit and the period of time which the material is subject to stress.

Resistibility against water ingress

IEC/EN 60 529

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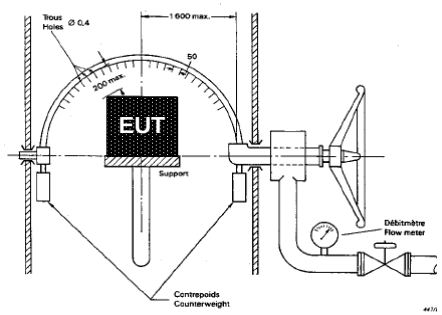
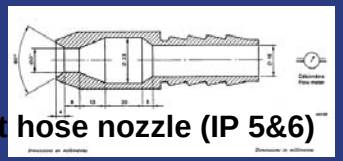


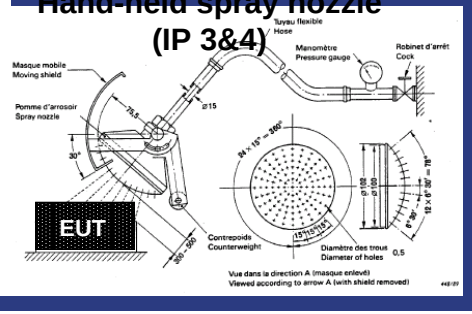
Oscillating tube (IP 3&4)

EUT



Jet hose nozzle (IP 5&6)

Hand-held spray nozzle (IP 3&4)



Test probe (finger/nail/pin)

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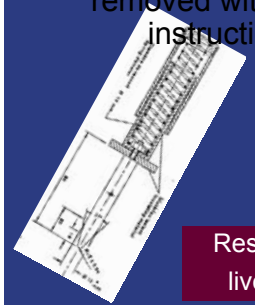
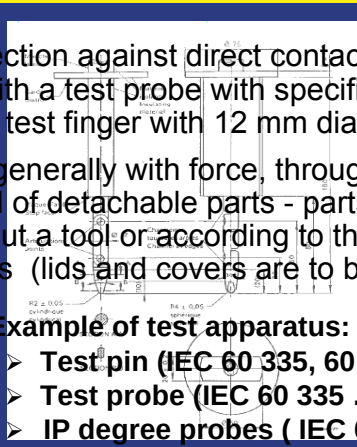
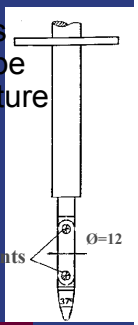
Control of protection against direct contact with live parts is performed with a test probe with specified dimensions (e.g. a test finger with 12 mm diameter)

applied, in generally with force, through openings after removal of detachable parts - parts that can be removed without a tool or according to the manufacture instructions (lids and covers are to be opened)







Example of test apparatus:

- **Test pin (IEC 60 335, 60 598 …)**
- **Test probe (IEC 60 335 …)**
- **IP degree probes (IEC 60 529)**

Results: The applied test probe/pin must not touch live parts (Class I) or basic insulation (Class II/III)

Screening test:
Check if protection covers are rigid!

© Dag Björklöf

Covers against laser or UV light
(emission hazards)

Covers for el. hazards

Covers for mechanical hazards

Easily access to
el. live connections or moving parts?

© Dag Björklöf

Electrical safety

There must be no access
to live electrical parts
(without tools)

There must be no access
to moving parts

Check if the el. cord comes loose!

© Dag Björklöf

Power cords and cables
must be secured clamped

Child safe lamps?

© Dag

Supply voltage should be less than
24 V for child-appealing luminaries

Safe Christmas?

© Dag Björ

Can cables and lamps easily be removed by a child?

Fire Statistics

1. Washing machines (~45 %)
2. El. heaters (~20 %)
3. TV:s (~15 %)
4. El. blankets (~10 %)
5. Dishwashers (~8 %)
6. Irons (~2 %)

In most cases fires are caused by
a faulty EEE and/or its power connection/cable,
but fires are also be caused by misuse
(*typical for electrical blankets*)

Christmas TV!

© Dag Björklöf

Common sources for fire hazards

- High power / large currents used in apparatus (e.g. heaters)
- Corrosion in apparatus with water heating elements
- Over-temperature sensors do not work because of dust
- Polyurethane insulation close to el. power connections
- Combustible material too close to heating elements (combustible materials can ignite and smoulder for hours)
- Power connections and heating elements becomes detached through rough handling and ignite plastic casings
- Dry joints are a major problem for the electronics industry (soldering defects caused by the solder failing to run correctly during manufacture, which leaves a high resistance pathway which progressively worsens with use

© Dag Björklöf

Electromagnetic phenomena are invisible, but the interference they may cause can be quite visible

Functional safety against EMI

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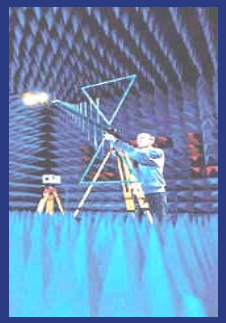
Not yet adequately covered by EMC standards

New standard IEC 61000-1-2. Ed. 2 (2008:11):
Methodology for the achievement of functional safety of EEE systems including equipment with regard to electromagnetic phenomena
Considers the potential of EMC hazards
- All functional states
- Misuse
- Multiple simultaneous threats (e.g. Surge & ESD)
- Reasonably expected environment

EMC testing

Emission measurements against defined limits
Immunity testing with defined disturbance levels:

- RF disturbances
  - Conducted
  - Radiated
- Transients
  - Clicks, Dips & Interrupts
  - Fast transients & surges
  - Electrostatic discharges



© Dag Björklöf

EMC test scheme

Conducted emission

ESD

Radiated emission

Radiated immunity

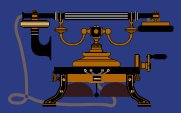
Simplified EMC control

© Dag Björklöf

Test object

Monitor emission
Check disturbances
with a transistor radio or a portable TV

Test object



Monitor immunity
Check immunity
with a portable disturbance generator
e.g. a mobile phone or a drilling machine
with high emissions (non-compliant with EMCD)

Basic immunity std

© Dag Björklöf

IEC/EN 61000- 4 - 2	Electrostatic discharge testing (ESD)
IEC/EN 61000- 4 - 3	Electromagnetic RF field testing
IEC/EN 61000- 4 - 4	El. fast transient (burst) testing (EFT)
IEC/EN 61000- 4 - 5	Surge testing
IEC/EN 61000- 4 - 6	Induced RF signal testing
IEC/EN 61000- 4 - 8	Power frequency (LF) magnetic field immunity test

Basic immunity std

© Dag Björklöf

IEC/EN 61000- 4 - 9	Pulse magnetic field immunity test
IEC/EN 61000- 4 - 10	Damped oscillatory magnetic field immunity test
IEC/EN 61000- 4 - 11	Voltage dips, short interruptions & voltage variations immunity test
IEC/EN 61000- 4 - 12	Oscillatory waves immunity test
.....	

General measurement standards

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CISPR 16

Specification for radio disturbances and immunity measuring apparatus and methods

- 📖 **CISPR 16 - 1 - 1...5: Radio disturbance and immunity measuring apparatus**
- 📖 **CISPR 16 - 2 - 1...5: Methods of measurement of disturbances and immunity**

General Measurement Standards

CISPR 16-1-1
Specification for radio disturbance
and immunity measuring apparatus and methods
Part 1-1: Radio disturbance and immunity measuring apparatus - Measuring apparatus

CISPR 16-2-1
Specification for radio disturbance
and immunity measuring apparatus and methods
Part 2-1: Methods of measurement of disturbances and immunity - Conducted disturbance measurements

Generic EMC standards

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IEC 61000-6-1	Generic immunity standard for residential, commercial & light industry
IEC 61000-6-2	Generic immunity standard for industrial environment
IEC 61000-6-3	Generic emissions standard for residential, commercial & light industry
IEC 61000-6-4	Generic emissions standard for industrial environment

Product family EMC std

© Dag Björklöf

Emission / Immunity standards

CISPR 22 / 24	IT equipment
CISPR 13 / 20	Broadcast equipment
CISPR 14-1 / 2	Household apparatus
CISPR 15 / IEC 61547	Lighting equipment
CISPR 11 / Generic std	ISM equipment (Industrial, Scientific, Medical radio frequency equipment)

"Basic" emissions standards*

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Radiated disturbances 30 MHz – 1(6)* GHz
RF EM fields [dB µV/m]
CISPR 22 / EN 55022 alt **CISPR 11 / EN 55011**

Conducted disturbances 150 kHz - 30 MHz
RF voltages [dB µV]
CISPR 22 / EN 55022 alt **CISPR 11 / EN 55011**

Conducted/Radiated 30 MHz - 300 MHz
Interference power [dB *p*W]
CISPR 14 / EN 55014 alt **CISPR 13 / EN 55014**

* EN 55022: 06 prescribes measurements up to 6 GHz for apparatus with clock frequencies above 108 MHz

Typical standard requirements

- Radiated disturbances up to 1-6 GHz
  - 30-37 dB µV/m QP (Class B)
  - 40-47 dB µV/m QP (Class A)
- Conducted disturbances up to 30 MHz
  - 46-66 dB µV QP (Class B)
  - 60-79 dB µV QP (Class B)
- Interference power
  - 45-55 QP dB pW (Appliances)
  - 45-65 QP dB pW (Portable Tools)
- Power line disturbances
  - Harmonics currents [I_3 < 2.3 A ...]
  - Flicker [$\Delta U / \Delta t$]
- Click disturbances

Emission »»

Typical standard requirements

Immunity

- Radiated RF
  - 3/10 V/m up to 1 or 2,7 GHz
- Induced RF
  - 3/10 V up to 80 MHz
- Transients
  - Burst 0.5-2 kV
  - Surge 0.5-2 kV
- ESD
  - ± 2/4/6/8 kV
- Magnetic fields
- Dips, interrupts & voltage variations

EMC failures

Dag Björklöf

A common reason for non-compliance
found according to a market surveillance test
is that products currently being manufactured
are not identical with the product
for which compliance have been shown.

Many times improvements and modifications have been made.
Components may have been changed, wiring is sometimes rerouted, or connector types have been changed.
In many cases, such design and manufacturing improvements do not equate to improved EMC.

An accepted test report or certificate is non-relevant if the product has been modified since its original testing.

EMI statistics

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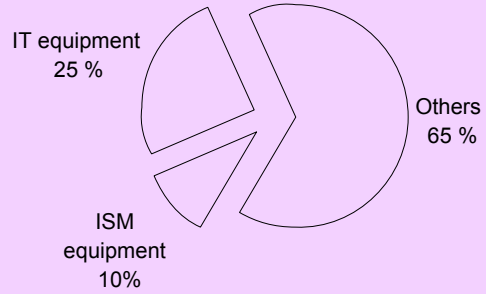

Statistics on Interferences
caused by Electrical Equipment (FICORA).

EMC test statistics

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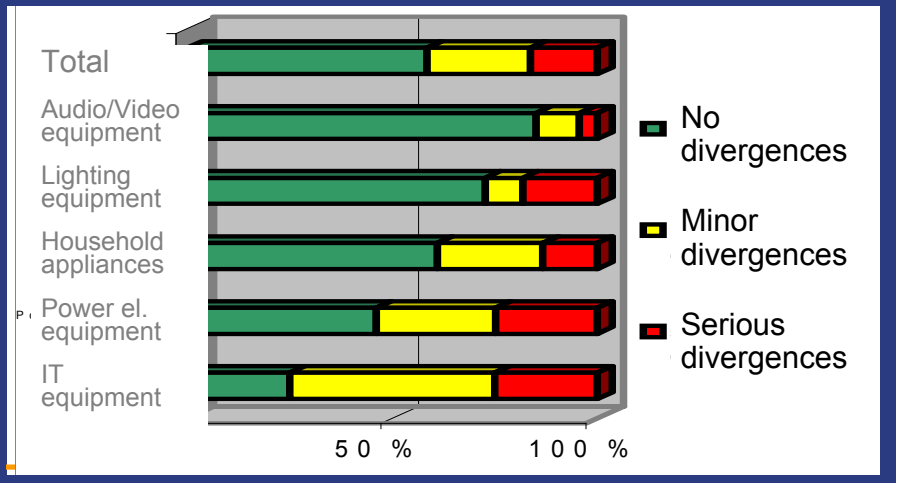
EMC test statistics (TUKES)



Test uncertainty

ASEAN-EU Programme for Regional Integration Support (APRIS) – Phase II

Workshop 10-12 Nov. 2009

Dr. Dag Björklöf

Project funded by the European Union
Implemented by IBF in consortium with CEN, Crown Agents and ACE

Uncertainty of a measurement / test

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The objective of a measurement / test is to determine the value of a measurand (the quantity subject to a measurement / the test level used in an immunity test).

The result of a measurement / test is only an estimate (approximation) of the value of the measurand and thus is complete only when accompanied by a statement of the uncertainty of that estimate.

Test uncertainty $u(x_i)$

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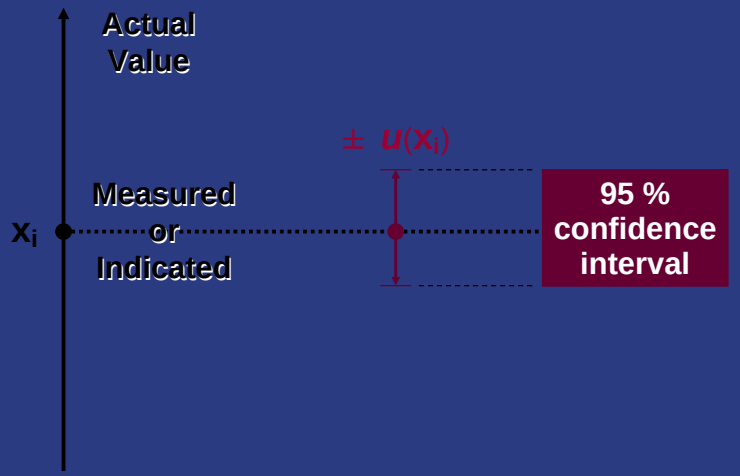

Repeatability of the EUT

© Dag Björklöf

The repeatability of the EUT
is of primary interest when a test result
tends to be close to a specified limit
to the extent that variations due to the EUT
may affect the decision:
compliant / non-compliant

Test System Repeatability

System Repeatability

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The repeatability of a test system
is determined by obtaining the
standard deviation of a series of
repeated readings on a stable EUT
(Equipment Under Test)

Non-compliance analysis based on test results

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Serious non-compliance	A > 1.0	B > 5.0	C > 3.0
Considerable non-compliance	0.3<A≤1.0	2.0<B≤5.0	2.0<C≤3.0
Minor non-compliance	0.1<A≤0.3	1.0<B≤2.0	1.0<C≤2.0
Compliance	A ≤ 0.1	B ≤ 1.0	C ≤ 1.0

Test results:
Parameter A: 0.05 ± 0.05
Parameter B: 1.5 ± 0.10
Parameter C: 2.0 ± 0.25
with 95 % confidence

Statistical method of evaluation

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The banning of sales,
or
the withdrawal of a type approval
as a result of a dispute

shall be considered only
after tests have been carried out
using a statistical method of
evaluation (CISPR)

Evaluation of test results

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To prove that a product is non-compliant it may require that several products of the same type need to be tested to get a good statistical confidence

CISPR 22 (EN 55022) & CISPR 11 (EN 55011)

state that in case of dispute EMC emission tests shall be performed on **not less than five items of the same type**

Statistical evaluation according to CISPR 22

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7.2 Application of limits in tests for conformity of equipment in series production

Compliance: $x_{mean} < x_{limit} - k*s_n$

k is the factor derived from tables of the non-central t-distribution which assures with 80 % confidence that 80% of the type is below the limit. s_n is the standard deviation.

The value of k depends on the sample size n:

n	3	4	5	...
k	2.04	1.69	1.52	...

Statistical evaluation

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Ex: x_{limit} = 37 dBµV/m / x_{mean} = 36.6 dBµV/m

Compliance: $x_{mean} < x_{limit} - k*s_n$

$x_{mean} = \Sigma x_i / n$ & $s_n = \sqrt{\Sigma(x_i - x_{mean})^2 / (n-1)}$

i	x_i	$x_i - x_{mean}$	$(x_i - x_{mean})^2$
1	37	+0.4	0.16
2	41	+4.4	19.36
3	36	-0.6	0.36
4	35	-1.6	2.56
5	34	-2.6	6.76

$i = 5 \Rightarrow k = 1.52$

$s_n = 2.7$ (calculated)

$k*s = 1.52*2.7 = 4.1$

$x_{limit} - 4.1 \sim 33$

Non compliance!

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CISPR 16-4-1 : 2003, *Specification for radio disturbance and immunity measuring apparatus and methods*
Part 4-1: Uncertainties, statistics and limit modelling – Uncertainties in standardized EMC tests

CISPR 16-4-2 : 2003, *Specification for radio disturbance and immunity measuring apparatus and methods*
Part 4-2: Uncertainties, statistics and limit modelling – Uncertainty in EMC measurements

CISPR 16-4-3 : 2003, *Specification for radio disturbance and immunity measuring apparatus and methods*
Part 4-3: Uncertainties, statistics and limit modelling – Statistical considerations in the determination of EMC compliance of mass-produced products

GUM

ISO/IEC Guide 98-3:2008

Uncertainty of measurement

Part 3: Guide to the expression of Uncertainty in Measurement (reissue of the 1995 version of the Guide to the Expression of Uncertainty in Measurement - GUM:1995 with minor corrections)

MS planning & preparation

ASEAN-EU Programme for Regional Integration Support (APRIS) – Phase II

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Consumers' rights have to be taken into account

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- ☻ right to the protection of life and health
- ☻ right to the protection of economic interests
- ☻ right to access to information
- ☻ right to legal remedies

Aim for MS Authorities responsible for products covered by the AHEEERR

- to promote
- to create
- to maintain

a harmonized market place of EEE products

with

- a reliable electrical safety level
- an acceptable EMC level

by governmental control actions

Market surveillance planning

© Dag Bjorklof

It is not cost efficient
sending Market Surveillance Inspectors
to make random visits into trade premises
to look for any kind of EEE products which
might be non-compliant with the AHEEERR

or to look for all kind of advertisements
concerning EEE products that might be
misleading.

Prioritization is a must
for efficient Pro-active Market Surveillance!

Market surveillance planning

© Dag Bjorklof

- ✓ Pro-active versus Re-active measures
- ✓ Check potentially dangerous product groups (proportionality to the risk)
- ✓ Stick to Objectivity and Consistency
- ✓ Be quick
- ✓ Inform about non-conforming products (public information - if possible)

MS Planning & Preparation

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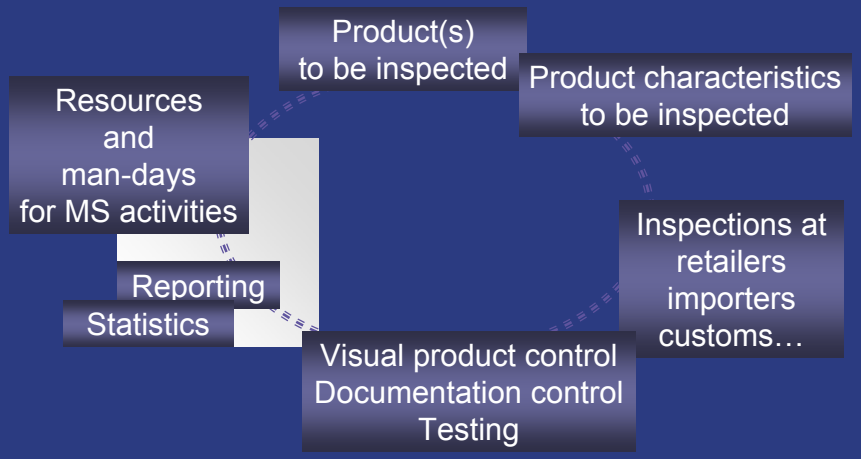

Plan the time scale

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-	Initiation
a few hours	Sampling
hours / days	Screening
days / weeks	Testing
days / weeks	Evaluation
days / weeks	Communication
days / weeks	Decision
weeks	Time to appeal

MS Campaigns

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Example on Sectoral Surveillance Programmes:

Month 1 & 2	Control of advertisements on public places and in magazines
Month 4 & 5	Control of safety of el. house-hold appliances
Month 8 & 9	Control of EMC for el. house-hold appliances
Month 11	Control of safety of el. lighting equipment
All year	Control of EEE products reported non-compliant by other AMS bodies (if they can be found on the local market)
	Control of EEE products imported from China
	Following-up consumer complaints

Post Market Surveillance activities

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PMS covers all levels of trade from primary producers, through importers, wholesalers, to retail outlets.

PMS Inspectors should have the power, competence and resources:

- to enter trade premises during normal trading hours
- to visit premises where products are put into service
- to require necessary information
- to check goods and documents for conformity
- to subject samples of products to examination and testing
- to stop the sale of non-conforming goods
- to require recall of products
- to set fines

Risk assessment

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Analysing hazards / risks is an important pre-requisite when planning market surveillance activities, since it makes it possible to focus control activities on areas where the risk for finding non-compliant products is high.

This can be done through:

® Risk Assessment of product categories

® Risk Assessment of trade premises

Risk assessment

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Checking available information / statistics is an asset for efficient planning / preparation of PMS activities, e.g. through

- databases with info on reported non-compliant products
- databases with information about trade/business
- customs information
- consumer complaints

Risk-based surveillance programme

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Characteristics to be considered
when risk assessing trade premises

- Trade status
  - business position in the supply chain
- Size of enterprise
  - small corner shops are lower rated than internationally owned supermarkets
- Previous history
  - inspection records, number of consumer complaints, previous cautions and prosecutions, eventual quality assurance systems in place …

Risk-based surveillance programme

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Frequency of visits at trade premises

- High Risk Premises
  - visits 1 or 2 times a year
- Medium Risk Premises
  - visits every 1 or 2 years
- Low Risk Premises
  - visits every 3 to 5 years

Visits must be planned

© D

- Product category/categories to be checked must be planned before visiting a trade premise
- What to check must be planned in advance (product characteristics, markings, documentation …)
- What to do when a product is suspected to be non-compliant must be decided in advance
- How to report a visit must be planned

Visits to trade premises
should not be announced in advance!

Market Surveillance Authority Inspection
Checklist

Inspector name: ……

Office:……

Name and address of inspected economic organisation:
……

Reference (representative present at the inspection):

……..Position:……

Tel/Fax:……Email:……

Reason for inspection:

Reactive inspection (consumer complaint etc) ☐
Proactive inspection (campaign or random) ☐
Initiated by client (upon request*) ☐

* Requested by: ……..

General checklist

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Type of market surveillance inspection	
Inspection at retailer's premises	☐
Inspection at the importer's premises	☐
Inspection at manufacturer's premises	☐
Inspection at exhibition / trade fair	☐
Inspection at the place of customs clearance	☐

Inspected apparatus / equipment / system
Description:
Denomination (identification):

General checklist

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Place of origin	
Domestic:	☐
AMS:	☐
Third country:	☐
Unknown:	☐
Manufacturer:	
Other information:	

General checklist

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Essential requirements applicable to the inspected apparatus / equipment:	yes	no
Electrical Safety	☐	☐
Electromagnetic Compatibility	☐	☐
Energy labelling	☐	☐

General checklist

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Conformity marking (Certification mark / Energy label etc.)	yes	no
Is there a relevant AMS marking on the product / packaging?	☐	☐
Which mark?		
Is the marking of appropriate *quality* (legibility, permanence, size)?	☐	☐
Is eventual energy labelling appropriate? (concerns refrigerators etc.)	☐	☐
Other markings?	☐	☐
Comments / remarks		

Certificate of Conformity (CoC)	yes	no
CoC available at the inspection?	☐	☐
If no CoC was available at the inspection, when will it/they be shown / sent?		
Contains name of the manufacturer / supplier?	☐	☐
Contains relevant address(es)?	☐	☐
Dated:	☐	☐
Contains identifiable denomination of the equipment in question?	☐	☐
Contains identifying mark of the equipment in question (type, model)?	☐	☐
Contains brief description of product?	☐	☐
Referred standards / norms / normative references:		
Comments:		

Certificate	yes	no
CAB (name / tel / fax / email):		

Accompanying documentation / Technical file information	yes	no
Is a user's manual available?	☐	☐
Are there instructions for assembly / installation?	☐	☐
Does the Technical File include test results / reports?	☐	☐

The apparatus/equipment was found compliant / non-compliant during inspection:

Comment:……

If non-compliant is it a minor or major offence:……

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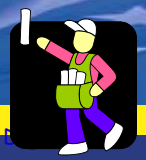
Recommended measures as a result of the market surveillance inspection:

- ☐ **Request for Technical File**
- ☐ **Request for test report**
- ☐ **Request / Purchase of a product for testing**
- ☐ **Other:**

Corrective measures needed:

- ☐ **Revision of documentation (manuals etc)**
- ☐ **Ban sale of product:**
- ☐ **Request for information to wide public:**
- ☐ **Ordering that the product should be made unserviceable:**
- ☐ **Other:**

Dating: (place, date):
Signature of inspected organisation representative:
Signature of inspector:
To be received by:



Call for the Technical File

Call for the TF gives a possibility to check:

- which tests have been performed
- mode of operation during testing
- test results
- who performed the tests

The TF should include detailed information of the product:

- product descriptions
- product performance
- eventual guarantees

Accompanying documents should include:

- installation and user manuals
- certificates
- eventual warnings - when relevant

Call for the Technical File

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Call for complete technical documentation must be in proportion to the extent to which the Market Surveillance Authority wishes to study the documentation

A MS Authority should call for the Technical File only if there is a good ground for believing that a product is non-compliant

Call for Product Information

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- **Call for specific product information might be an efficient pre-requisite when planning a campaign to check a certain product category or product parameter**
- **Call for detailed product information can also be efficient in cases where testing is complicated and costly**

It is also a trigger to make producers aware of product requirements and that active market surveillance exists!

Post Market Surveillance planning

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- Efficient allocation and use of resources for pro-active as well as re-active market surveillance
- Developing / Updating / Initiating annual plans for market surveillance activities
- Developing Guidelines and give regular training for market surveillance inspectors
- Training and nominating inspectors as responsible specialists & trainers for specific areas
- Establishing working groups concerning the application of standards and test methodology (coordination groups of MS inspectors, CAB representatives, Business representatives etc)
- Seeing to it that economic operators are aware of the legislation as well as of MS activities

Re-active Market Surveillance

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Besides Pro-Active measures
Market Surveillance Authorities
have to take care of complaints
and product incident/accident reports
submitted by consumers,
manufacturers, distributors & retailers.

When a product incident/accident report is reported,
Market Surveillance staff has to verify the concern,
work to determine the root cause,
and take appropriate action to resolve the concern.

Enforcement

ASEAN-EU Programme for Regional Integration Support (APRIS) – Phase II

Workshop 10-12 Nov. 2009

Dr. Dag Björklöf

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Corrective actions Sanctions

- remarks (requiring corrections)
- sales or delivery ban
- warning to persons that may be at risk
- prohibit to use
- withdrawal from distributor chain
- product recall from consumers
- destruction of dangerous products

Sanctions

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The competent authority must take all appropriate measures to restrict or prohibit placing non-compliant products on the market and to withdraw dangerous products from the market

Appropriate action must be taken against anyone who places a non-compliant product on the market

Level of action

Where there is an indication that a product might not be fully compliant with mandatory EEE requirements, the MS Authority can at an early stage contact the supplier about the suspicion of non-compliance, to give the supplier a chance to check the product.

The corrective action depends on the level of non-compliance and action taken must be in accordance with the principle of proportionality

Assess the risk!

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What to do
when a product is found to be non-compliant?

To decide relevant action:

- Identify the hazard and its cause
- Estimate how many products are affected
  - products in the supply chain
  - products in the hands of consumers
- Consider the severity of eventual injury
- Assess the likelihood of such an injury
- Evaluate acceptability of overall risk
- Decide corrective action - if needed

Level of action

If the level of risk is judged to be **high** corrective action is likely to involve products in the hands of consumers and the producer should and take immediate action to:

- Inform and warn
- Isolate producer's stocks
- Ask distributors to isolate affected products
- Inform suppliers of any affected components
- Set up a programme to contact consumers.

If the level of risk is judged to be **moderate** and the corrective action only involves products in the distribution chain, it may be enough to withdraw these and give the authorities details of what has been done.

Sanctions

Caution / Remark / Notion:

A product has a slight safety or protection deficiency, which should be corrected by the time the next product batch comes onto the market.

Sanctions

Delivery ban (without recall):

The importer or manufacturer may not deliver new products onto the market until safety or protection shortages have been corrected.

However, those products, which already have reached the market, may be sold.

Sanctions

Sales ban (with recall):

The importer or manufacturer may not deliver new products onto the market until safety or protection shortages have been corrected.

Products already on the market for sale must be withdrawn from wholesalers' and retailers' stocks.

Sanctions

Recall from users:

The importer or manufacturer may not deliver any products onto the market until safety or protection shortages have been corrected.

In this case products already placed on the market must - if possible - be withdrawn from users (usually recall by advertisement)

MS action

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- **A formal decision about eventual sanction with a possibility for the supplier to appeal (to the court)**
- **Notification of the non-compliant product and decided sanctions**

It is up to each MS to take action!

Corrective action

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- Plan a communications programme to trace delivered products
- Request supplier to announce corrective action message
  - recall from consumers (for replacement or refund)
  - warnings about correct use of products to consumers
- Monitor the response
- Decide what to do with products that are returned
- Decide if further action is needed

Key considerations for a successful corrective action are **acting quickly** and **communicating effectively !**

Corrective action announcement

- A clear heading containing the words:
  Important Safety Warning
- Product identification details (**name of product, batch number, serial number, bar code, colour, size and a picture or line drawing of the unsafe product**)
- A clear description of what is wrong with the product and details of the safety risk or potential safety risk
- Information on the type of corrective action proposed and any refund or replacement
- Clear instructions how to deal with the product (e.g. whether and where to bring or send back the product or how to arrange for a repair)
- A web site address or hot line for further information

Appendix II - Example of a good corrective action announcement

The following example has been created to illustrate the main features that should be incorporated into a good corrective action announcement. **The information in this example is not intended to refer to any real product or company.**

A suitable heading	**IMPORTANT SAFETY WARNING**
Product type	GREENGRASS LAWN MOWERS
Model	Model – GG 123
Picture	
Location of serial number	
Details of problem and when batch was sold	We have become aware that some GG123 lawnmowers, sold between 1 March 2002 and 30 July 2002 have a manufacturing defect.
Hazard	This defect may cause the handle to break under heavy load, at the joint with the frame, possibly leading to serious injury
How to check for affected product	If you own a GG123 mower, please check the serial number as shown in the diagram.
Identification	The models affected have serial numbers from X5761 to X5874 or Z2376 to Z3199 (inclusive) and were sold in **Smiths Homestores**, **Barney's Gardenware** and also through the **GreenGrass** Mail Order Catalogue.
Sales outlets	
Further action to take	If you have an affected mower please **stop using it immediately.** Please return it to the retailer it was purchased from for a replacement mower or a full refund of the purchase price.
Redress offered	
Free Helpline	If you have any queries please do not hesitate to contact GreenGrass on **Freephone 0800 1234 5678 (24 hrs)**
Apologies (if appropriate)	We wish to thank you for your co-operation and apologise for any inconvenience.
Company responsible for recall	**GreenGrass & Co, 10 Central Rd, Europa Trading Estate, Newchester, United Kingdom WW1 2GG**
Contact details	**www.greengrassmowers.com/productrecall**

Enforcement strategy

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The PMS strategy should take into account:

- ☺ **Prevention rather than cure**
- ☺ **Prosecutions a last resort**
- ☺ **But firm sanctions when necessary**

Note that flexibility and co-operation between business and enforcement authorities usually leads to compliance

Contacts with stakeholders
-
Information & Co-operation

ASEAN-EU Programme for Regional Integration Support (APRIS) – Phase II

Workshop 10-12 Nov. 2009

Dr. Dag Björklöf

Project funded by the European Union
Implemented by IBF in consortium with CEN, Crown Agents and ACE

Stakeholders

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Consumers

Consumer organisations (NGOs)

Information suppliers (Newspapers / Radio / TV)

Producers / Suppliers / Dealers / SMEs

Trade organisations / Chambers

Inform, Advice and Educate stakeholders

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- educate *consumers*
  of their rights when buying goods or services
- inform consumers
  of availability of advice organizations
- inform consumers
  of the role of enforcement agencies
- inform consumers what to do and
  who to contact when finding a non-compliant product
- advice *producers and sellers*
  of consumers rights when buying goods or services

Information campaigns

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An information campaign can serve several objectives:

Informing consumers of their rights and giving them advice and assistance by producing information, e.g. freely available pamphlets for consumers, links to relevant web-sites, advertisements etc

Informing consumers who to contact to report a dangerous / counterfeit / non-compliant product

Educating economic operators of their responsibilities in respect of consumer protection matters by producing information pamphlets for traders

Raising the profile of the responsible MS authority

Co-operation and Co-ordination

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Liaison with NGOs (e.g. via a MS councillor)

Liaison with Chambers / Trade Organizations

Co-operation between Enforcement Authorities

Sharing information in between national MS authorities responsible for different areas / product categories promotes efficient market surveillance planning

Co-operation with Customs

The involvement of customs authorities makes it possible for dangerous products to even reach the market

Co-operation and Co-ordination

© Dag Björklöf

Co-operation with Customs

© Dag Björklöf

Co-operation between Customs & Market Surveillance Authorities should focus on the following aims:

- to promote a cooperative network between Customs and Market Surveillance authorities at the AMS level

- to improve targeting of controls of unsafe products by exchange of risk information

- to share experience, knowledge and best practices on co-operation and controls by providing guidelines

Co-operation with CABs

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Conformity Assessment Bodies
have usually an extensive experience
of the application of standards for conformity assessment
and can therefore be of support for a national
MS Authority when analysing or testing a product.

MS Authorities may sub-contract a CAB
for technical advice or testing according to standards,
under the condition that the decision-making responsibility
regarding the result remains exclusively
with the Enforcement Body.

Co-operation and Co-ordination

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Benefits of information exchange
and administrative co-operation
between Member States

- Info concerning non-compliant products
  - increases the efficiency of national
  ..market surveillance operations

- Info concerning enforcement activities
  - promotes the consistency of enforcement
  - facilitates following-up corrective actions

Co-operation and Co-ordination

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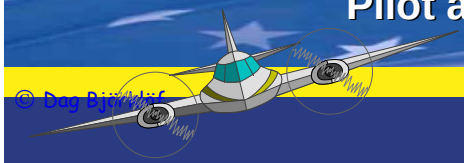
Benefits of information exchange
and administrative co-operation
between Member States

- Planning and co-ordination of campaigns

- increases the efficiency of MS operations
- unsafe products can be taken off the market throughout the AMS at an early stage
- multiple inspections can be avoided

Pilot actions



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Co-ordinated pilot actions in between AMS MS Authorities with regard to certain high risk products can be carried out to improve the effectiveness of co-operation

MS networking

ASEAN-EU Programme for Regional Integration Support (APRIS) – Phase II

Workshop 10-12 Nov. 2009

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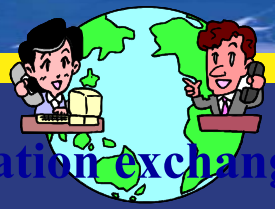

Information exchange system

Administrative co-operation should be an obligation for Member States

Co-ordination of national operations increases the efficiency of market surveillance

Market surveillance info systems

© Dag Björklöf

What can be earned from sharing info?

- Unsafe products can be taken off throughout the whole AMS market at an early stage
- Product information is stored i.e. multiple inspection can be avoided
- The involvement of customs authorities in the info system makes it possible for dangerous products to cross borders

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Notifications of EEE products found non-compliant with the essential requirements of the AHEEERR should be reported in between AMS in a comprehensive and systematic way to be stored in a common database administrated by one Member State

The use of a harmonized report form is thereby an asset:

Notification of an EEE product found non-compliant with the essential requirements of the AHEEERR concerning

© Dag Björklöf

- ☐ Electrical Safety
- ☐ EMC
- ☐ Energy Efficiency

Notification Number: xx.zz
Date of notification: YY/MM/DD

1. Name of Notifying Authority
- Member State:
- Name / Dept:
- Address info:

2. Identification of EE
- Product type:
- Description:
- Electrical specs:
- Brand name & type:
- Name & address of brand owner:
- Name & address of supplier / importer:

3. Proof of conformity

Mandatory Certification Mark(s):
Voluntary Certification Mark(s):

Certificate of Conformity:	Available	☐
	Not Available	☐
	Requested	☐
Technical Documentation:	Available	☐
	Not Available	☐
	Requested	☐
	Not Requested	☐

4. Technical Specifications

Technical File:	Acceptable	☐
	Not Acceptable	☐
Reference to Standards:	Available	☐
	Not Available	☐
	Requested	☐

Referred standard(s):
Comments / Remarks:

5. Conformity Assessment Reference(s)

Tested by:	Designated AMS Lab:	☐
	Certification Body:	☐

6. PMS Monitoring (Control measures / Tests performed)

.....

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7. Description of Non-Compliance / Nature of Hazards

.....

8. Measures taken

Specific conditions for further sales: ☐
Ban of further sales: ☐
Recall of products: ☐
Fine: ☐

Comments:

.....

8. Additional information

Copy of Certificate: ☐
Copy of test report: ☐
Technical Manual: ☐
Other: ☐

Comments:

.....

9. Photo

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Exchange information

Operational objectives for administrative co-operation by exchange of information in between Market Surveillance Authorities in different Member States are aimed to:

- to improve the ability of national authorities to cooperate in enforcing consumer protection rules across borders;
- to improve the quality and consistency of enforcement of consumer protection laws throughout the AMS.
- to improve the monitoring of the functioning of the ASEAN market in terms of the impact on consumer economic interests.

European info systems - between EU Member States

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- ICSMS

  Internet-supported information & communication system for pan-European, cross-border market supervision of technical products

- **- Consisting of a closed and a public are**
  - Running team: UMEG, Germany
- **- Partners: Germany, Belgium, Sweden ...**

- IDA

  Interchange of Data between Administrations

European info systems - between EU Member States

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- CIRCA

  Computer data base for exchange of market surveillance info.

  (includes information on directives as well as safeguard clause notifications)
- RAPEX

  Rapid alert system for Non-Food products (exchange of information about dangerous products)

RAPEX

RAPEX is the EU rapid alert system for dangerous consumer products, with the exception of food, pharmaceutical and medical devices.

It allows for the rapid exchange of information between Member States via Central / National contact points and the Commission.

Every Friday, the Commission publishes a weekly overview of dangerous products reported by national authorities (notifications). This weekly overview gives information on the product, the possible danger and the measures that were taken by the reporting country.

RAPEX

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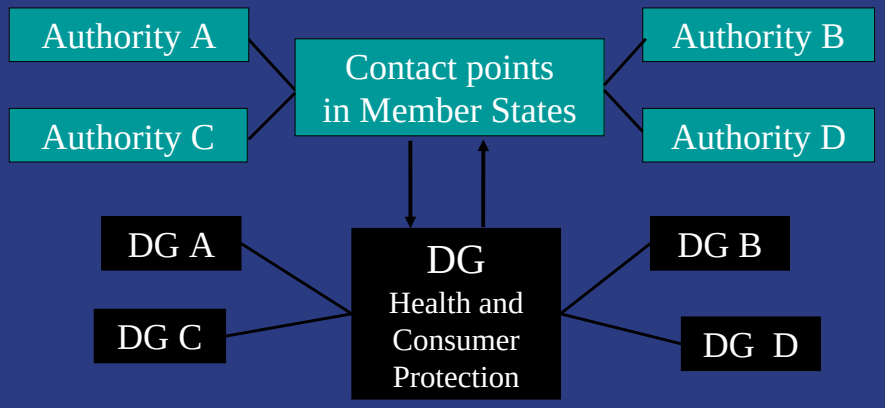

Info about RAPEX and RAPEX weekly reports can be found at:

http://ec.europa.eu/consumers/dyna/rapex/rapex_en.cfm

RAPEX reporting

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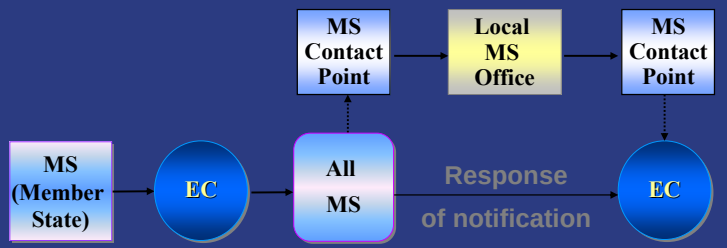

Notification form

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- in application of Article 11 of Directive 2001/95/EC (GPSD)
- in application of Article 12 of Directive 2001/95/EC (GPSD)
- requiring emergency action from Member States

GENERAL INFORMATION

01. Notifying country and contact person;
02. Date of notification;

PRODUCT

03. Category of products and Customs code;
04. Product name, brand, price and country of origin;
05. Type/Number of model/Bar Code/Batch code;
06. Description/photograph (format .jpg) of the product and its packaging;
07. Standards or regulations applicable;
08. Proof of conformity;

Notification form

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PRODUCER
09. Name, address and contact information for the manufacturer or its representative;
10. Name, address and contact information of the exporter/importer;

DISTRIBUTOR and RETAILER
11. Name, address and contact information for the distributors or their representatives;
12. Supplier (shop, supermarket, by mail, Internet) and countries of destination;

DANGER
13. Type of risk :
14. Summary of the results of tests/analyses and conclusions;
15. Description of accidents which have occurred;

MEASURES ADOPTED
16. Voluntary measures (scope, nature and duration);
17. Compulsory measures (scope, nature and duration);

OTHER INFORMATION
18. Additional information.

Reaction to notification

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in application of Article 12 of Directive 2001/95/EC (GPSD)

01. **Reacting country and contact person;**
02. **Date of reaction;**
03. **Notification number, notifying country and product name;**
04. **Product found:** yes / no
05. **Assessment of the risk;**
06. **Voluntary measures** (scope, nature, duration and justification);
07. **Compulsory measures** (scope, nature, duration and justification);
08. **Duration;**
09. **Other information.**

RAPEX notifications (http://ec.europa.eu/rapex)

Year & Week	Ref. No.	Noti-fying country	Product description (with photo)	Danger	Measures adopted by notifying country	Products were found and measures were taken also in (country)

http://ec.europa.eu/consumers/dyna/rapex/rapex_archives_en.cfm
Search on LVD for non-compliant EEE products (listed since 2005)

LVD Notification 2009 / w30

Category: Lighting chains
Product: Lighting chain – Christmas lights

Brand: ICICLE LIGHTS 180
Type/number of model: MG-100 and MG-140 (on the packaging)
barcode: 6903711101179

Description: The lighting chain includes 180 series-parallel-connected non-replaceable miniature lamps with resistor bridge. The flashing unit operates the four parallel circuits of the lamps. Main components: „XINGDA XD-01 2.5 A 250 V~ VDE, KEMA" mains plug; „EK-04, PRESS, ETS EMC LVD IP44" 8-function flashing unit; mains cable without marking.
Technical parameters: F-mark, Class II.

Country of origin: China

Notifying country: Hungary

LVD Notification 2009 / w30

Danger: Electric shock and fire

The product poses a risk of electric shock and fire because:
- the lack of cord anchorage protecting against pulling and twisting force,
- the connections are not properly fixed and live parts may be accessible,
- the insulation of the mains cable is only single insulated and thus flashover may occur,
- there is no protection against ingress of moisture,
- the cross section area of the core is less than required.

The product does not comply with the Low Voltage Directive and the relevant European standard EN 60598

LVD Notification 2009 / w24

Category: Lighting equipment

Product: Portable lamp - Trouble light

Brand: Power G
Type/number of model: Barcode 3800070031556

Description: Portable lamp with a metal grill, a cable measuring 7.5 meters and a two-pin plug without an earth terminal. Technical data on the product: 220 V, ~50 Hz, 60 W. The lamp is packed in a plastic transparent bag closed with orange cardboard.

Country of origin: China

Notifying country: Bulgaria

LVD Notification 2009 / w24

Danger: Electric shock

The product poses a risk of electric shock because the lamp holder is not ensured against rotation by two independent means - at least one of which should be operable with the aid of a tool.

The product does not comply with the Low Voltage Directive (LVD) and the relevant European standard EN 60598.

LVD Notification 2009 / w24

Category: Lighting equipment
Product: Portable lamp - Wohnlichter

Brand: Esto Qualität
Type/number of model: number of model 56328;
bar code 9003348835861

Description: A portable metal lamp in the form of a colourful flower in a flowerpot with grass, and the inscription "Happy flowers Blau".
The following information is written on a label on the product: ESTO, art. 56328, E14 Glote 1x max 40W, 230V~, CE, sign F; plug type "euro" with technical data: 2.5A, 250V~; supply cord KEMA № 19103 CCC27 300/300 V 2x 0.75mm² and assembled switch with symbols: 2/250V~, CE; packed in a cardboard box.

Country of origin: Austria

Notifying country: Bulgaria

LVD Notification 2009 / w24

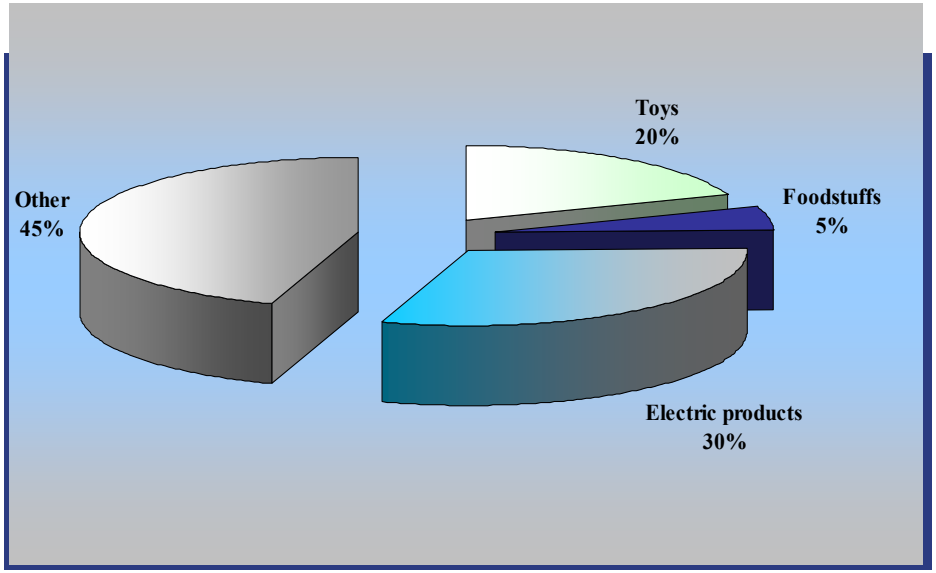
Danger: Electric shock

The product poses a risk of electric shock because :
- it is possible to access live parts,
- there is no transformer for voltage exceeding the low voltage level.

The product does not comply with the Low Voltage Directive (LVD) and the relevant European standard EN 60598.

Products were found and measures were taken also in: Germany

Typical composition of alerts



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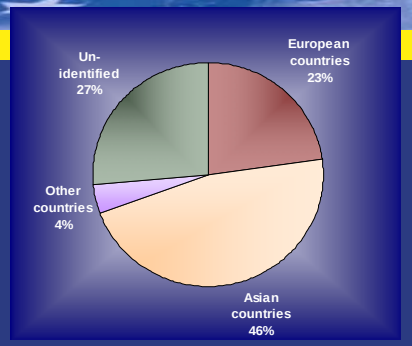
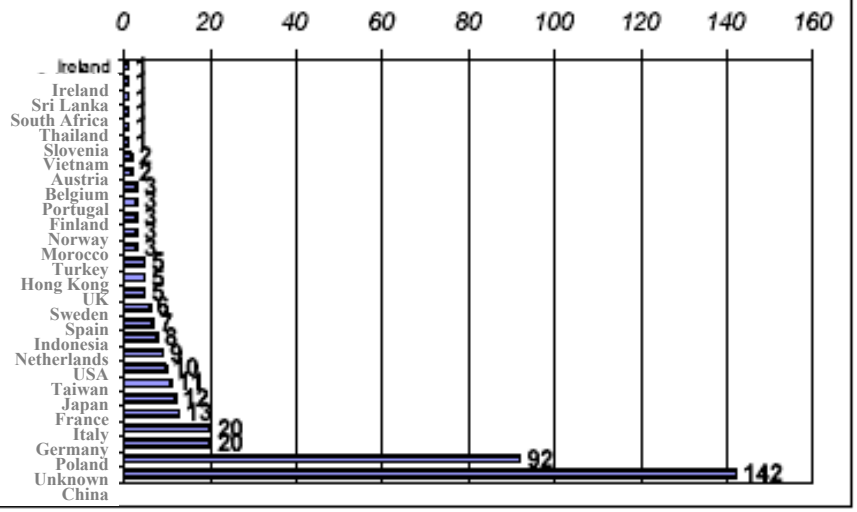
Notifications
Origin of products



European countries	22,80%
Asian countries	46,53%
Other countries	4,16%
Unidentified	26,50%

Statistics concerning origin of notified products



Notification activities vary among Member States

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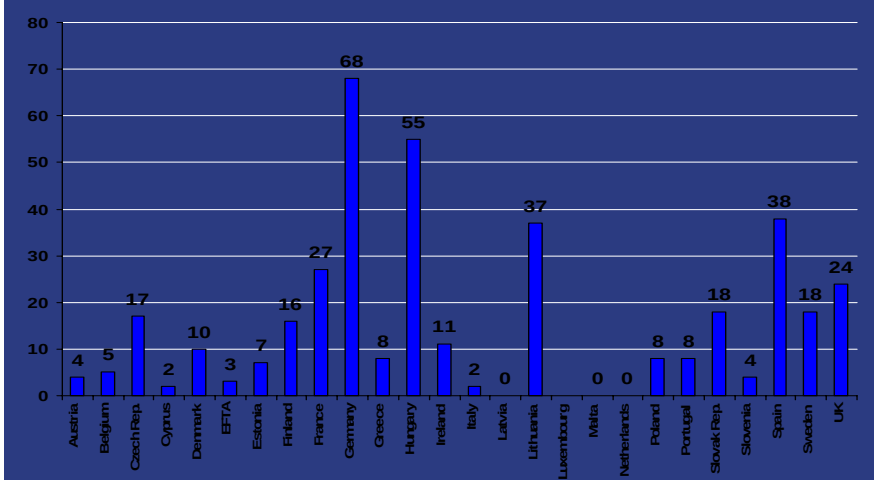
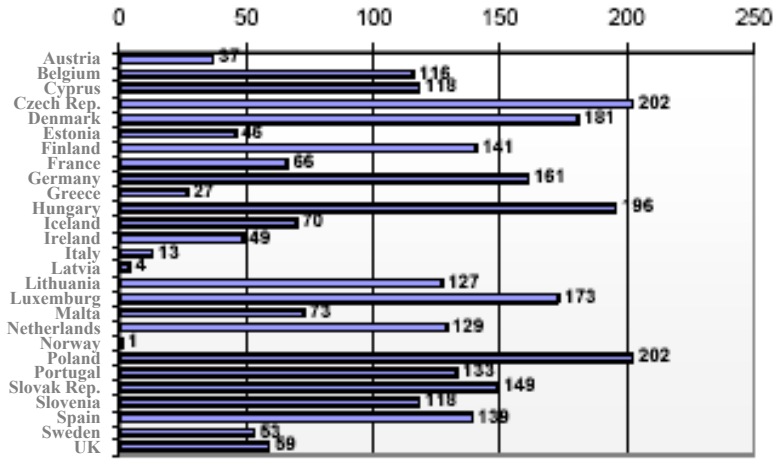


Ref: 2004 Rapex Report

Statistics concerning reaction on notifications



Notifications 5 years ago

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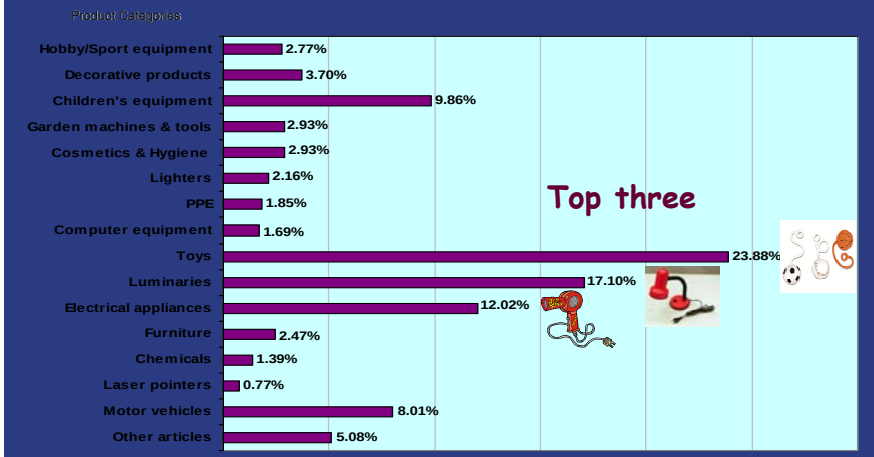
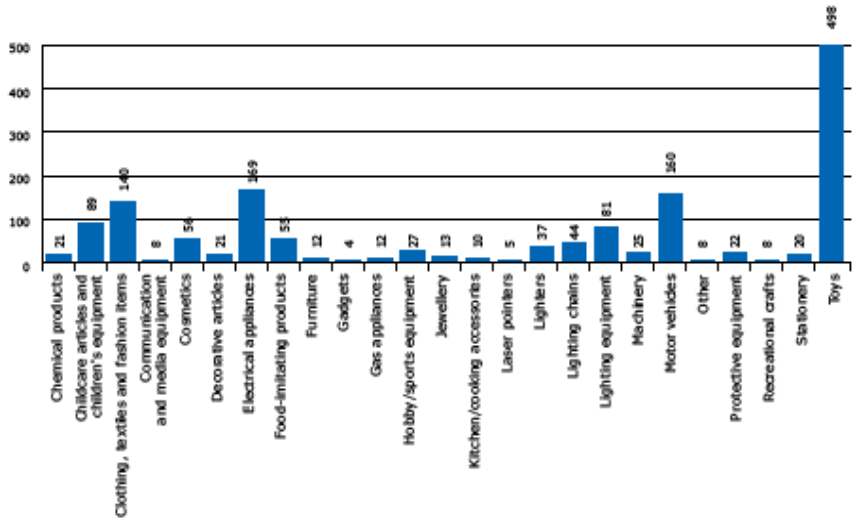
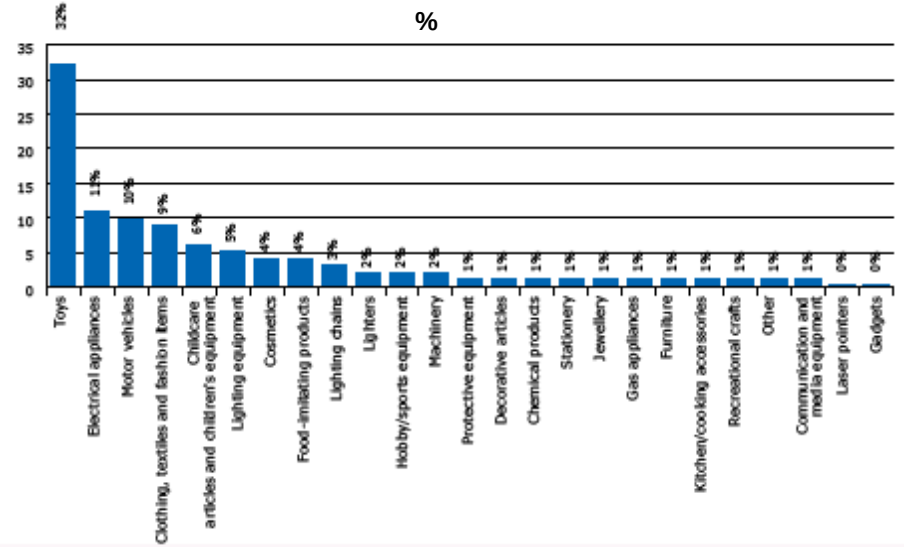


Product categories notified last year



Ref: 2008 Rapex Report

Product categories notified last year



Ref: 2008 Rapex Report

ome statistical experiences of MS

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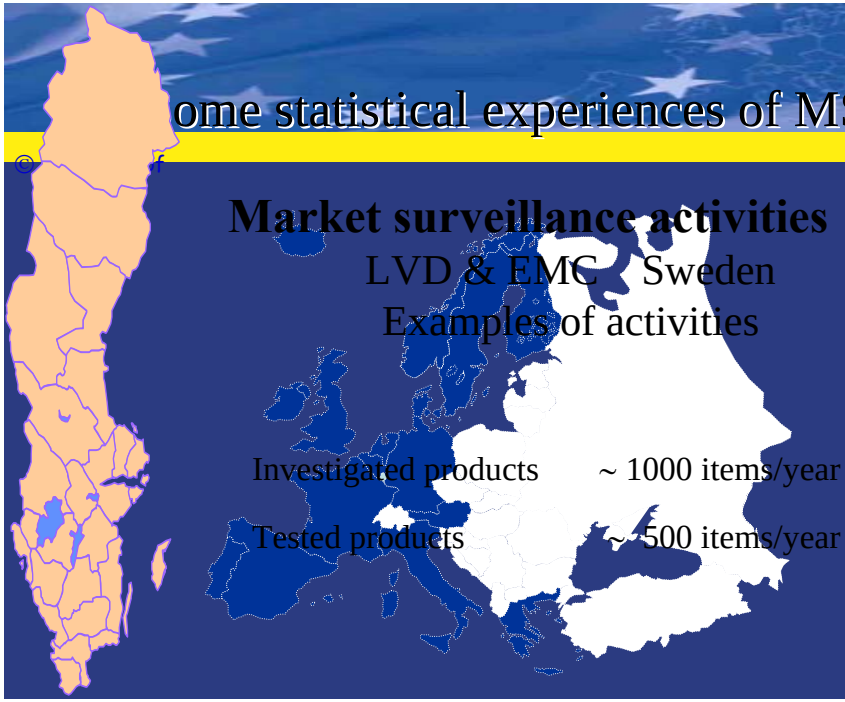
Market surveillance activities

LVD & EMC – Sweden

Examples of activities



Investigated products ~ 1000 items/year

Tested products ~ 500 items/year

Market surveillance

LVD, Example of results

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Lighting equipment
(125 items tested) 50 % market restrictions

Household appliances
(125 items tested) 30 % market restrictions

IT equipment
(40 items tested) 10 % market restrictions

Installation components
(50 items tested) 30 % market restrictions

Power supplies & transformers
(30 items tested) 40 % market restrictions

Market surveillance

EMC, example of results

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Lightning equipment	30 % market restrictions
Household appliances	35 % market restrictions
IT equipment	35 % market restrictions
Industrial equipment	50 % market restrictions
Power supplies & frequency converters	65 % market restrictions

Market surveillance activities

EMC, Germany, Example of yearly activities

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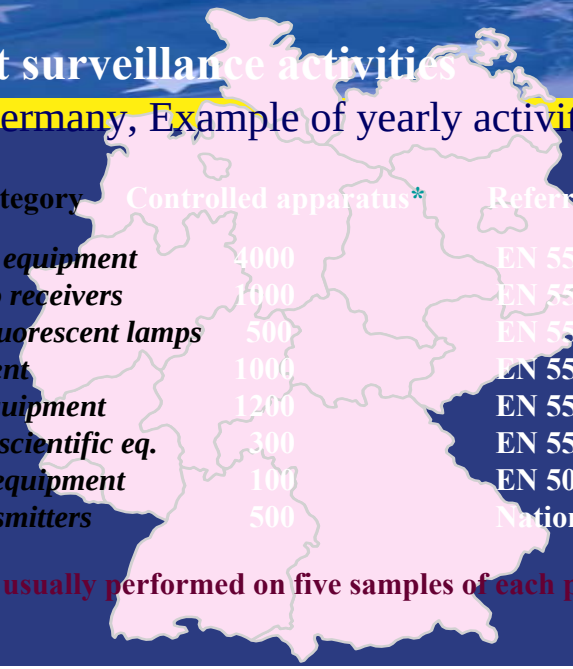

Product category	Controlled apparatus*	Referred std
Household equipment	4000	EN 55 014
TV & radio receivers	1000	EN 55 013
Lights & fluorescent lamps	500	EN 55 015
IT equipment	1000	EN 55 022
Telecom equipment	1200	EN 55 022
Medical & scientific eq.	300	EN 55 011
Industrial equipment	100	EN 50 081-2
Radio transmitters	500	National std

*** tests are usually performed on five samples of each product**

Market surveillance

Examples of test results

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Product category	Products found non compliant
Domestic appliances	20 %
Electric tools	30 %
TV & radio receivers	50 %
Lights & fluorescent lamps	40 %
IT equipment	30 %
Telecom equipment	10 %
Scientific equipment	50 %
Medical equipment	0 %
Industrial equipment	15 %

Market surveillance in the Netherlands

Examples of activities/results

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Lighting appliances	120 items tested / 20 failed
Household appliances	40 items tested / 5 failed
Electrical tools	10 items tested / 1 failed
Audio/video appliances	20 items tested / 5 failed
IT appliances	15 items tested / 2 failed
TTE appliances	75 items tested / 5 failed
Radio transmitting appliances	15 items tested / 2 failed

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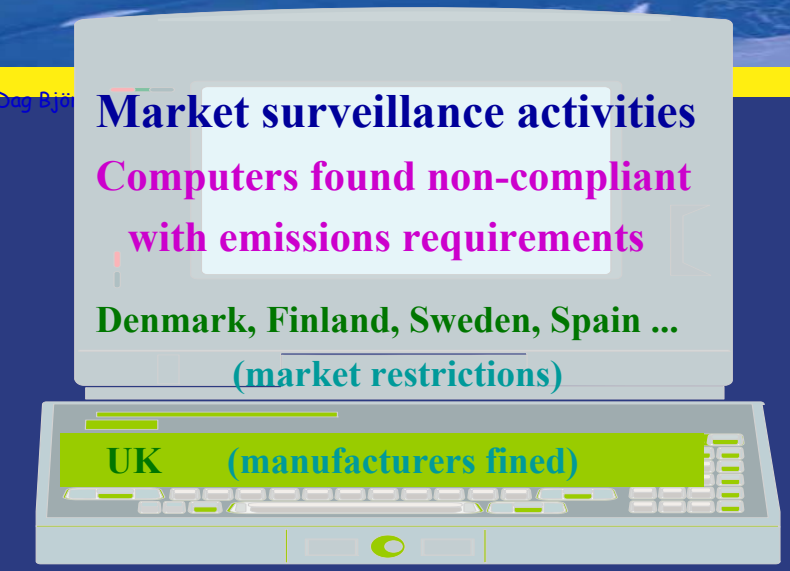
Market surveillance activities

Computers found non-compliant with emissions requirements

Denmark, Finland, Sweden, Spain ...

(market restrictions)

UK (manufacturers fined)



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Market surveillance activities

Uninterruptible Power Supplies

The Finnish Authority TUKES had 14 items EMC tested

10 were found non-compliant

ASEAN-EU Programme for Regional Integration Support (APRIS) – Phase II

Workshop 9-10 Nov. 2009

Thank You

Dr. Dag Björklöf

Project funded by the European Union
Implemented by IBF in consortium with CEN, Crown Agents and ACE

Guidelines
for the development of a harmonized post market surveillance system in ASEAN Member States (AMS)

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Guidelines
for the development of a harmonized post market surveillance system in ASEAN Member States (AMS)

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